

CLAIMS

1. A protective film for polarizing plate having a substrate film of a resin material and, laminated on at least one surface thereof directly or via another layer, an antireflection layer, characterized in that the substrate film has a photoelastic coefficient of less than $9 \times 10^{-12} \text{ Pa}^{-1}$ and a saturated water-absorbing percentage of less than 0.05%, and exhibits a warpage percentage of 1% or less when formed into a film having an average thickness of 50 μm and a dimension of 100 mm x 100 mm and allowed to stand at 60°C and a humidity of 95% for 500 hours.

2. The protective film for polarizing plate according to claim 1, wherein the resin material contains an alicyclic structure-containing polymer.

3. The protective film for polarizing plate according to claim 1 or 2, wherein the antireflection layer is a single layer or multilayer film with two or more layers of an inorganic oxide.

4. A method for preparing the protective film for polarizing plate according to any one of claims 1-3, comprising a step of forming an antireflection layer on the surface of a substrate film made of a resin material or on the surface of any layer formed on the substrate film, characterized in that the antireflection layer is formed by an ion-plating method, sputtering method, vacuum evaporation method, electroless plating method, electroplating method, or a combination of two or more of these methods.

5. The method for preparing the protective film for polarizing plate according to claim 4, wherein the step of forming an antireflection layer comprises sequentially laminating two or more thin layers of inorganic oxide on the surface of a substrate film

or on the surface of any layer formed on the substrate film, wherein the substrate film, with or without any other layer formed thereon, is preferably caused to pass through a series of film-forming chambers, each equipped with a means for forming a thin layer of inorganic oxide, whereby two or more thin layers of inorganic oxide are sequentially formed on the surface of the substrate film or on the surface of any layer formed on the substrate film.

6. The method for preparing the protective film for polarizing plate according to claim 4 or claim 5, wherein the substrate film is made from a resin material containing an alicyclic structure-containing polymer.

7. A polarizing plate with antireflection function comprising a polarizing plate laminated on one side of the substrate film of the protective film for polarizing plate according to any one of claims 1-3 on which the antireflection layer is not provided.

8. An optical article equipped with the polarizing plate with antireflection function according to claim 7.